

ABSTRACT

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PROCESS FOR THE ANIONIC POLYMERIZATION OF LACTAMS

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The invention relates to a novel process for the anionic polymerization of lactams, in which:

(a) (i) a catalyst capable of creating a lactamate and (ii) a regulator chosen from the amides of formula $R1-NH-CO-R2$, in which $R1$ can be substituted with a radical $R3-CO-NH-$ or $R3-O-$ and in which $R1$, $R2$ and $R3$ denote an aryl, alkyl or cycloalkyl radical, are dissolved in the molten lactam; the temperature of this reaction mixture being between the melting point of the lactam and $15^{\circ}C$ higher in order to ensure its good stability,

(b) the solution from step (a) is introduced into a mixing device and is then heated to a temperature which is sufficient to obtain bulk polymerization of the lactam in no more than 15 minutes.

(b) is usually a continuous reactor, for example an extruder; however, it can be replaced with a mould.